

DOCUMENTATION SHEET

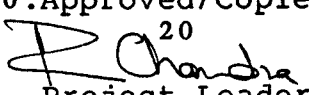
NAL PROJECT DOCUMENT

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13. Abstract

This project deals with the development of a set of flight worthy radomes which form the parts of wing mounted store(pod). The various activities of this program are: design, analysis, fabrication, testing and certification. This set contains radomes of tangent ogive shapes and arbitrary complex geometries. Solid wall concept with E glass-epoxy composite material was selected which caters for limited frequency band. Stress analyses of radomes subjected to flight loads were carried out by finite element technique. Fabrication was carried out by employing pressure bag moulding and vacuum bag moulding techniques. Structural tests were carried out to ensure that the radomes resist the flight loads in a satisfactory manner. These radomes were painted under controlled humidity and temperature conditions with special imported coatings which provide protection against rain erosion and static electricity. These radomes were subjected to six environmental tests as per MIL 810C and JSS. No physical damage and functional deterioration was noted after the environmental tests. Eight sets of four radomes were supplied to the sponsoring authority.